

A B S T R A C T

PROCESS FOR REMOVAL OF CARBON DIOXIDE FROM FLUE GASES

5

10 A process to removal and capture of carbon
dioxide from flue gas is provided. Carbon dioxide is
extracted from flue gas by contacting the flue gas
with a solvent in a solvent extraction zone (1) to
obtain a carbon dioxide-depleted flue gas,
regenerating the solvent in a solvent regeneration
zone (2) by heating the carbon dioxide-containing
solvent to obtain a regenerated solvent and a carbon
15 dioxide stream and reacting the carbon dioxide stream
obtained in step (b) with a bivalent alkaline earth
metal silicate in a mineral carbonation zone (3) by
contacting the carbon dioxide stream with silicate
particles dispersed in an aqueous solution.

20